View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Elsevier - Publisher Connector

27 systematic reviews and health technology assessments were included, 30 clinical trials were extracted which the control and intervention arms were treated with methotrexate. The results of mixed treatment comparison revealed that tofacitinib displays similar safety than adalimumab, certolizumab, infliximab, etanercept, golimumab, rituximab, tocilizumab and abatacept in occurrence of serious adverse events and serious infections due to not having statistically significance differences. In the outcome of withdrawal due to adverse events, etanercept showed less probability of occurrence than tofacitinib (OR= 2.21, IC95%: 1.02-4.03), regarded to other biological DMARDs, they presented the same risk than tofacitinib. **CONCLUSIONS:** The results of mixed treatment comparison indicated that tofacitinib is similarly safe than biological DMARDs considering the occurrence of serious adverse events and serious infections.

PMS3

FACTORS AND REASONS ASSOCIATED WITH SWITCHING IN RHEUMATOID ARTHRITIS PATIENTS EXPERIENCED ON BIOLOGIC DMARDS AND IMPACT ON HEALTH CARE RESOURCE UTILZIATION IN AN INTEGRATED HEALTHCARE SYSTEM

Rashid N[1], Patel C[2], Li Z[1], Guerrero V[1], Nadkarni A[2], Aranda G[2]

[1]*Kaiser Permanente, SCAL Region, Downey, CA, USA,* [2]*BMS, Plainsboro, NJ, USA*

OBJECTIVES: Evaluate factors and reasons associated with switching from biologic disease-modifying anti-rheumatic drugs (bDMARD) in Kaiser Permanente Southern California (KPSC) experienced RA patients; evaluate RA related health care resource utilization (HCRU) and costs associated with bDMARD switching. **METHODS:** A retrospective database study was conducted using KPSC patients greater than or equal to 18 years of age and with a diagnosis of RA (ICD-9 714.xx). The identification period was from 01/01/2009 to 12/31/2012. The index date was defined as the first identified bDMARD prescription during the identification period. Patients were on the same index bDMARD for 24 months prior to index date and were followed up for 12 months post-index. Patients were categorized into a switch and a non-switch group during follow up. A multivariate regression analysis was conducted to evaluate factors associated with patients switching versus not switching. Chart notes were reviewed 30 days prior and 30 days post switch date to identify reasons for switching. RA related HCRU and costs were calculated for 12 months pre/post-index for both groups. **RESULTS:** 1,753 patients were identified (5% switchers, and 95% non-switchers). Factors associated with bDMARD switching were: obesity, Charlson comorbidity index (CCI) score ≥2, narcotics or NSAIDS use, non-adherence, and higher outpatient use in the prior 6 months. Over 40% of patients switched due to adverse events, lack or loss of efficacy. Patients who switched had higher RA related pre/post-index outpatient visits and higher 12 months pre/post-index outpatient visit costs versus those patients that did not switch. **CONCLUSIONS:** Previous studies have evaluated bDMARD switching patterns in RA patients; however these unique data from this integrated healthcare system highlights reasons associated with bDMARD switching. Reasons associated with bDMARD switching included medication adverse events, and lack/loss of efficacy. RA Patients who switched bDMARD had higher RA related outpatient HCRU and costs.

PMS4

FACTORS AND REASONS ASSOCIATED WITH SWITCHING IN RHEUMATOID ARTHRITIS PATIENTS NEWLY INITIATED ON BIOLOGIC DMARDS AND IMPACT ON HEALTH CARE RESOURCE UTILIZATION IN A MANAGED CARE ORGANIZATION

Rashid N[1], Aranda G[2], Li Z[1], Guerrero V[1], Nadkarni A[2], Patel C[2]

[1]*Kaiser Permanente, SCAL Region, Downey, CA, USA,* [2]*BMS, Plainsboro, NJ, USA*

OBJECTIVES: Evaluate factors and reasons associated with switching from initial biologic disease-modifying anti-rheumatic drugs (bDMARDs) in Kaiser Permanente Southern California (KPSC) RA patients; to evaluate RA related healthcare resource utilization (HCRU) and cost associated with bDMARD switching. **METHODS:** A retrospective database study from time period 01/01/2007 to 12/31/2012 was used to identify KPSC patient's ≥ 18 years of age and with a diagnosis of RA (ICD-9 714.xx). The index date was defined as the first bDMARD prescription with no prior history of bDMARD use 12 months pre-index date. Patients were followed up for 12 months post-index and were categorized into a switch group and a non-switch group during follow up. A multivariate regression analysis was conducted to evaluate factors associated with bDMARD switching. Chart notes were reviewed 30 days prior and 30 days post bDMARD switch to identify reasons for switching. RA related HCRU and costs were calculated for 12 months pre/post-index for both groups. **RESULTS:** 2,171 patients were identified (12% switchers, and 88% non-switchers). The average time for patients to switch was 110 days (SD + 95.5). Differences in baseline characteristics included more use of corticosteroids, narcotics, and higher ER and outpatient visits in the switch group. Factors associated with bDMARD switching were: female gender, obesity, corticosteroids use, other conventional DMARD use, higher ER/outpatient use in the prior 6 months, and patients initiated on Etanercept. Over 70% of patients switched due to adverse events, lack or loss of efficacy. Patients who switched had higher RA related cost during 12 months pre/post-index compared to the non-switch group. **CONCLUSIONS:** This is a unique study that used robust data from an integrated healthcare system to evaluate reasons associated with bDMARD switching in this RA population. Reasons associated with bDMARD switching included medication adverse events, and lack/loss of efficacy; bDMARD switchers had significantly higher RA related costs.

PMS5

META-ANALYSIS OF EFFICACY AND SAFETY OF DENOSUMAB IN POSTMENOPAUSAL OSTEOPOROSIS

Xuan S[1], Ma J[2], Liu GG[3]

[1]*Yale University, New Haven, CT, USA,* [2]*University of Utah, Salt Lake City, UT, USA,* [3]*Peking University, Beijing, China*

OBJECTIVES: Denosumab is a human monoclonal antibody against receptor activator of nuclear factor-kB ligand (RANKL), which can be used for osteoporosis as an antiresorptive agent. The aim of this study was to evaluate the efficacy and safety of denosumab for the treatment of postmenopausal osteoporosis by performing a meta-analysis. **METHODS:** Pubmed, EMBASE, the Cochrane Central Register of Controlled Trials, and other trial registries through July 2014 were searched. Inclusion criteria were randomized, placebo-controlled clinical trials on patients with postmenopausal osteoporosis, 60mg of denosumab every 6 months, consistent time framework, and derivable outcomes for incidences of new vertebral, nonvertebral fractures, and adverse events. A meta-analysis using fixed-effects model was conducted to calculate pooled relative risks with a 95% confidence interval. Heterogeneity across studies was also assessed. **RESULTS:** Six RCTs involving 9134 patients were included. The results showed that denosumab was associated with a significant reduction in new vertebral fractures risk (RR=0.325, 95%CI 0.256 to 0.412, p<0.001). A decreased risk of nonvertebral fractures was also observed (RR=0.789, 95%CI 0.670 to 0.928, p=0.004). As compared to the placebo arm, the denosumab arm showed no evidence of significant risk of total adverse events [RR=1.003, 95%CI 0.991 to 1.015], serious adverse events [RR=1.042, 95%CI 0.967 to 1.124], and fatal adverse events [RR=0.785, 95%CI 0.557 to 1.067]. In addition, the incidence rates of all treatment-related adverse events and dropouts due to adverse events were not significant between the denosumab and placebo arms. **CONCLUSIONS:** The efficacy of denosumab on fracture risk reduction and its safety has not yet been systematically proved. However, results of this meta-analysis showed that denosumab was associated with a significant reduction in the risk of vertebral and nonvertebral fractures in patients with postmenopausal osteoporosis. No evidence of increased risk in serious, fatal and all treatment-related adverse events were detected.

PMS6

ADVERSE DRUG REACTIONS ASSOCIATED WITH THE USE OF DISEASE MODIFYING ANTI-RHEUMATIC DRUGS IN PATIENTS WITH RHEUMATOID ARTHRITIS

Machado J[1], Ruiz A[2], Machado-Duque M[1]

[1]*Universidad TecnolÃ³gica de Pereira, Pereira, Colombia,* [2]*Glaxo, Bogota, Colombia*

OBJECTIVES: Describe the adverse drug reactions (ADR) and their incidence in patients with rheumatoid arthritis who were treated in the Colombian Heath System. **METHODS:** Retrospective cohort study using information from all patients who were diagnosed with rheumatoid arthritis and attended Specialized Institution centers in the cities of Bogotá, Cali, Manizales, Medellin and Pereira between December 1st, 2009 and August 30th, 2013. The ADRs were obtained from medical records and the pharmacovigilance system register and were sorted by frequency and affected tissue according to WHO Adverse Reaction Terminology (WHO-ART). **RESULTS:** A total of 949 ADR reports were obtained from 419 patients with an incidence of 32.8 ADRs per 100 patient-years; these were from a cohort of 1,364 users followed for an average of 23.8±12.9 months. There was a female preponderance (n=366, 87.4%) and a mean age of 52.7±13.1 years. The highest incidence rates for ADRs were reported for tocilizumab, rituximab and infliximab with 28.8, 23.1 and 13.3 reports per 100 patient-years respectively. The most frequent were "Elevated transaminase levels" and "Dyspepsia". Overall, 87.7% of ADRs were type A; 36.6% were classified as mild, 40.7% as moderate and 22.7% were severe. As a result, 73.2% of patients who experienced an ADR stopped taking their drugs. **CONCLUSIONS:** the occurrence of ADRs in patients treated for rheumatoid arthritis is common, especially in those associated with the use of biotechnologically produced anti-rheumatic drugs. This should be emphasized in reports and monitoring is needed to reduce the risks in these patients.

PMS7

INCIDENCE AND PROGNOSTIC FACTORS FOR CONTRALATERAL HIP FRACTURE AMONG HUNGARIAN MEN OVER 60 YEARS

Juhász K[1], Gajdácsi J[2], Boncz I[3], Molics B[3], Sebestyén A[3]

[1]*National Health Insurance Fund Administration, Pécs, Hungary,* [2]*National Health Insurance Fund Administration, Budapest, Hungary,* [3]*University of Pécs, Pécs, Hungary*

OBJECTIVES: Patients with low-energy hip fracture represent a high-risk group for subsequent hip fractures. Our nationwide study focused on the effect of demographic and clinical factors on the risk of contralateral hip fractures in Hungarian men over 60 years. **METHODS:** The retrospective observational cohort study based on data of the Hungarian National Health Insurance Fund. Men aged 60 years and over diagnosed with primary femoral neck fracture in year 2000 were included in the study. The incidence of contralateral fractures was investigated between 01 January 2000 and 31 December 2008. Occurrence of secondary hip fractures was analyzed in relation to patients' age, place of living, hospital providing treatment for primary hip fracture, type of primary fracture, comorbidities, type of surgical intervention for primary fracture and survival time. To evaluate the prognostic factors multivariate Cox proportional hazard regression and Kaplan-Meier survival analysis were used. **RESULTS:** 917 patients matched the study criteria. 49 secondary fractures (5.34%) occurred during the observation period. The incidence density of secondary fractures was 0.13 cases per person-year, and the annual distribution showed that the highest incidence occurred in the second year (1.21%). Increasing age (years, HR: 1.06, p= 0.001, CI: 1.02- 1.09) and place of living (town vs. village, HR: 2.82, p= 0.022, CI: 1.16- 6.84) were found as risk factor of subsequent hip fractures. Log rank test revealed no significant difference (p=0.056) between the survival time of patients living in village (mean survival time: 1456 days) and in towns (mean survival time: 1481 days). **CONCLUSIONS:** We demonstrated the increased risk of subsequent hip fracture in men with higher age and living in towns. Considering that there was no difference in the survival time, there is a need to identify lifestyle factors influencing the incidence of subsequent hip fractures in men living in village and in towns.